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REMARKS

Reconsideration is respectfully requested in view of the amendments and remarks herein.

In paragraph 4, Claims 1, 2, 10-12, 14-16, 18, 20, 21, 23-41, 46-58, and 61-68 stand rejected under 35 USC 103(a) as obvious over Gutweiler (US 5,573,842) in view of Dauvergne (FR 2,401,941 Abstract), and Shohi (EP 1036775), further in view of Degeilh (US 4,696,971).

In paragraph 5, Claim 22 stand rejected under 35 USC 103(a) as obvious over Gutweiler (US 5,573,842) in view of Dauvergne (FR 2,401,941 Abstract), in view of Shohi (EP 1036775), in view of Degeilh (US 4,696,971), and further in view of an online product brochure from Great Lakes Chemical Corporation.

In paragraph 6, Claims 59-60 stand rejected under 35 USC 103(a) as obvious over Gutweiler (US 5,573,842) in view of Dauvergne (FR 2,401,941 Abstract), in view of Shohi (EP 1036775), in view of Degeilh (US 4,696,971), and further in view of Keppler (US 4,433,108).

Applicants discuss the rejection with respect to the process claims, as the product claims are now cancelled.

The final Action dated October 13, 2006, provides a detailed discussion of the claims and the cited documents, and at page 14 directly responds to the arguments provided by Applicants in their previous response. In addition, the Advisory Action dated January 8, 2007 adds some additional comments concerning why the rejections are being maintained. Rather than present a detailed response to each point in the lengthy Office Action, applicants focus herein to the comments at page 14 of the Action and the comments in the Advisory Action.

At page 14, the final Action states that applicants arguments are not persuasive. That is, Applicants previously argued that Degeilh teach away from the claimed invention because the claims are directed to a process involving the step of raising the pH of the mixture to at least pH 10, whereas Degeilh teaches a process involving a step of neutralizing to a pH of no more than 5. The Action states that this argument is not persuasive because Degeilh only teaches away from the claimed pH, i.e., only teaches a preference of a pH of no more than 5, when the product is used in applications where the ability to adhere to glass is critical. That Action states that "Since applicants' claims are not related to any glass adherence application, it would not be considered a teach away reference for one of ordinary skill in the art not working on polymers products that are in the glass related applications."

First, applicants submit that Degeilh is not limited to teaching that the pH should be lowered for improved glass adhesion. In fact, Degeilh is focused on

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improving the Dauvergne (FR 2,401,941) process and indicates that the Degeilh lower pH reduces costs and provides other advantages. Thus, Degeilh is focused on improvements in addition to improving glass adhesion and teaches away from using the Dauvergne process steps for a variety of reasons.

Second, the claimed invention is directed to making PVB useful for making glass laminates that used in windshields for vehicles such as automobiles, architectural applications, etc. Concerning this point, applicants direct the Examiner's attention to the Abstract and to the paragraph beginning on page 1, line 9. In addition, applicants submitted a number of pages from the DuPont website that describe the science and history of laminated safety glass

(<http://www.dupont.com/safetyglass/en/science/index.html>,
<http://www.dupont.com/safetyglass/en/science/history/index.html> and
<http://www.dupont.com/safetyglass/en/science/technology/index.html>, and the brochure entitled "DuPont™ Laminated Glass Interlayers").

Further, while applicants believe that amending the claims in order to respond to this rejection is unnecessary, in order to expedite prosecution applicants have amended the claims to recite the processes produce products that are "suitable for use in the manufacture of glass laminates." Applicants submit that this phrase supports patentability over the cited documents since Degeilh expressly teaches away from using DOSS in a process involving stabilizing a mixture of the type obtained in step (I) by (a) raising the pH of the mixture to at least pH 10, (b) isolating the resin by draining the liquid, and (c) washing the resin with neutral pH water. Concerning this point, please see (for example) the paragraph at column 2, lines 15-24. Moreover, Degeilh states that the Degeilh invention is an improvement over the Dauvergne (FR 2,401,941) process. That is, Degeilh teaches that the process should be carried out with DOSS and neutralizing to pH of no more than 5, not using dodecylbenzene sulphonate in combination with a higher pH as in Dauvergne. Therefore, Degeilh leads away from the claimed invention and cannot be combined with the other documents as in the rejection.

Applicants also present new claims 69-76 which recite that the process further comprises laminating the polyvinyl butyral sheet to glass. Thus, these claims recite the specific process that Degeilh leads away from.

The Advisory Action includes the following comments from the Examiner:

"Regarding whether the teachings of Degeilh can be combined with the teachings of Dauvergne because Degeilh teaches a process that requires a Ph of no more than 5, applicants fail to recognize that the DOS teachings of Degeilh is combinable with the teachings of Dauvergne because the pH and

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DOS teachings of Degeilh are independent variables in the process of Degeilh. Therefore, the examiner has a reasonable basis that the pH condition of Degeilh does not prevent (or teach [away]) the DOS teachings to be incorporated into the teachings of Dauvergne.”

Applicants submit that these remarks are improper and incorrect. First, applicants submit that the teachings of Degeilh cannot be independently selected as stated in the Advisory Action unless there are specific portions of Degeilh supporting that approach. Second, Degeilh’s teachings concerning pH and DOSS are interlinked and cannot be separated. Third, Degeilh states that the Degeilh invention is an improvement over the Dauvergne (FR 2,401,941) process and, thus, Degeilh teaches that the process should be carried out with DOSS and neutralizing to pH of no more than 5, not using dodecylbenzene sulphonate in combination with a higher pH as in Dauvergne. Therefore, Degeilh leads away from the claimed invention and cannot be applied as described in the Advisory Action and other Actions.

Concerning these points, applicants point out that the Action does not point to any technical support for the statements in made in the Advisory Action.

More importantly, at column 2, lines 15-20, Degeilh teaches that they are improving the process of Dauvergne (FR 2,401,941) by using the combination of discontinuing neutralization as soon as a pH of 5 is reached and by use of DOSS. At column, 2, lines 33-40, Degeilh states that “the use of DOS effective as an emulsifier substantially decreases the ‘curing time’ of the polyvinyl butyral after neutralization to a range of 5 to 10 minutes.” In other words, the use of DOS is linked to the discontinuing neutralization as soon as a pH of 5 is reached.

This can also be seen from the Degeilh paragraph beginning at column 3, line 15, which states:

“A particularly important requirement for improving the properties of the polyvinyl butyral according to the invention is the presence of DOS effective as an emulsifier. DOS advantageously facilitates the after-treatment of the polyvinyl butyral to separate the product. Unlike conventional emulsifiers which are removed from the polymer by the addition of a base, DOS is completely and inexpensively removed from the polymer by a thorough washing with water. As a result, a product is inexpensively obtained which has superior adhesiveness to contiguous glass materials.”

From the above quote, it can be seen that the DOS is used in Degeilh to facility the after-treatment of the polyvinyl butyral to separate the product in an environment wherein the pH is not raised by adding a base, and thus Degeilh’s teachings related to DOS cannot be separated from the teachings related to pH as asserted in the Advisory Action.

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For the above reasons, applicants submit that the rejection is improper and should be withdrawn.

Amendments to the Claims

The process claims are amended to recite that the processes produce products that are "suitable for use in the manufacture of glass laminates." Support is in the Abstract and the paragraph beginning on page 1, line 9.

The product claims are cancelled.

Claims 69-76 are added for the process of laminating the polyvinyl butyral sheet to glass as described in Abstract and at page 1, line 9 on.


Entry and consideration are respectfully requested.

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In view of the foregoing, allowance of the above-referenced application is respectfully requested. Should any matters remain, the Examiner is invited to telephone the undersigned at the below-listed direct dial telephone number in order to expedite prosecution.

Respectfully submitted,



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